



LEH1208A
LEH1208A-2GMMSC
LEH1216A
LEH1216A-2GMMSC

Hardened Managed Ethernet Switches Quick Start Guide

Available models

Part Number	Product Name	Description
LEH1208A Series (Class 1 Div. 2 ISA 12.12.01 certified for use in hazardous environments)		
LEH1208A	8-Port 10/100 Mbps Hardened Managed Ethernet Switch	8 ports 10/100, DC power
LEH1208A-2GMMSC	8-Port 10/100 Mbps with 2-Port GE MMSC Hardened Managed Ethernet Switch	8 ports 10/100, 2-Port GE, DC power
LEH1216A	16-Port 10/100 Mbps Hardened Managed Ethernet Switch	16 ports 10/100, DC power
LEH1216A-2GMMSC	16-Port 10/100 Mbps with 2-Port GE MMSC Hardened Managed Ethernet Switch	16 ports 10/100, 2-Port GE, DC power

This quick start guide describes how to install and use the Hardened Managed Ethernet Switch with Class 1 Div. 2 certification. Designed for explosion-resistant environments, Hardened Managed Ethernet Switches provide reliable switching in industrial areas constrained by space and explosion hazards.

Functional Description

- Meets NEMA TS1/TS2 Environmental requirements such as temperature, shock, and vibration for traffic control equipment.
- Meets EN61000-6-2 & EN61000-6-4 EMC Generic Standard Immunity for industrial environments.
- Supports Command-Line Interface in RS-232 consoles.
- 1000BASE-SX: Multimode SC type.
- Supports 8192 MAC addresses. Provides 2M bits memory buffer.
- Alarms for power and port link failure by relay output.
- Supports DIN-rail or panel mounting installation.
- Power Supply: Redundant DC terminal block power inputs or 12-VDC DC jack, 100–240 VAC external power supply.
- Supports RS-232 console, Telnet, SNMP v1 & v2c & v3, RMON, Web browser, and TFTP management.
- Supports IEEE 802.3/802.3u/802.3ab/802.3z/802.3x, auto-negotiation, 10-/100-/1000-Mbps, full/half duplex, auto MDI/MDIX.
- Operating voltage and max. current consumption: 1.25 A @ 12 VDC, 0.625 A @ 24 VDC, 0.313 A @ 48 VDC.
Power consumption: 15 W max.
- Field wiring terminal: Use copper conductors only, 60/75, 14–24 AWG torque value 4.5 lb-in.
- -40 to +167° F (-40 to +75° C) operating temperature range. Tested for functional operation @ -40 to +185° F (-40 to +85° C).
UL508 Industrial Control Equipment certified maximum surrounding air temperature @ 167° F (75° C).

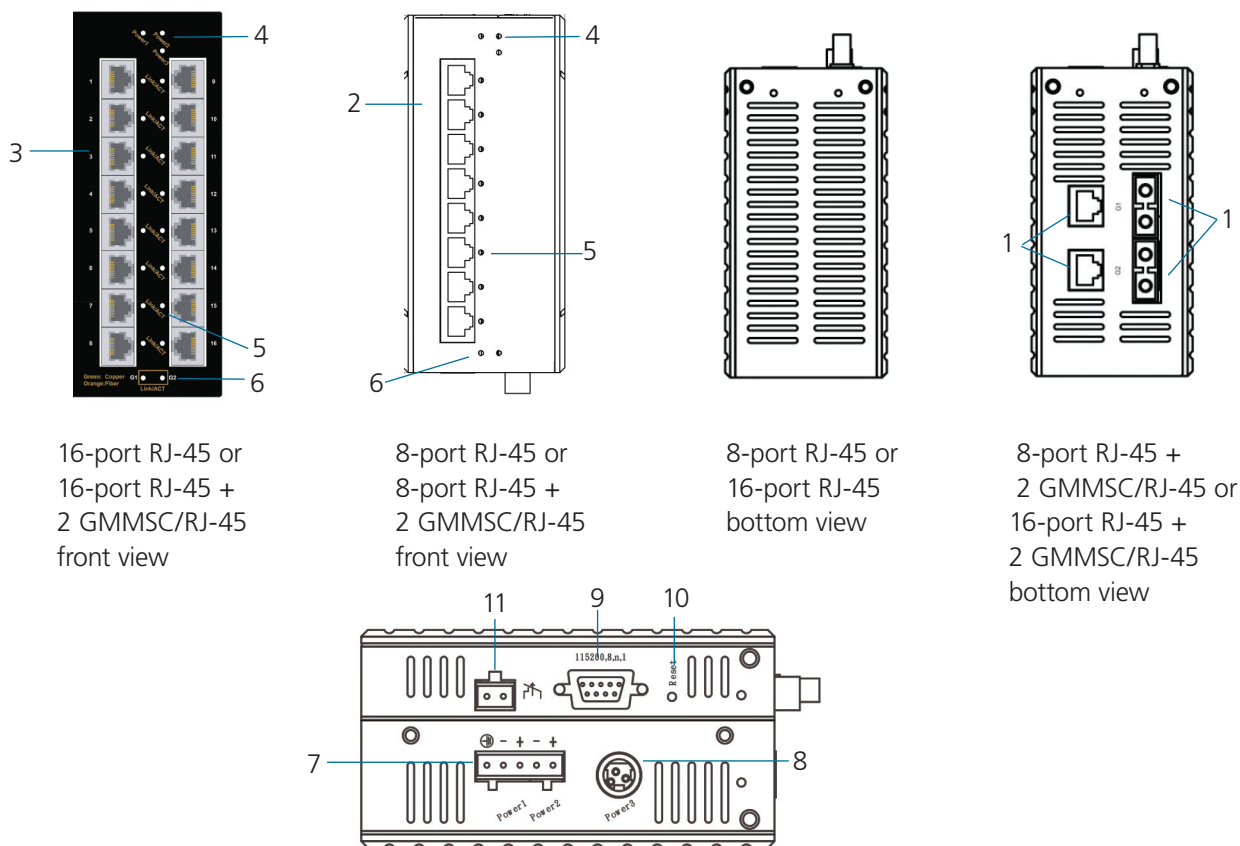
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LEH1200 Series Hardened Ethernet Switches Quick Start Guide

Physical Description

Designed for rugged environments, Hardened Managed Ethernet Switches provide reliable switching in industrial areas.



All models: top view.

Figure 1. LEH1200 Series Hardened Managed Ethernet Switch.

LEH1200 Series switches components

Number in Figure 1	Product Name	Description
1	Combo ports G1 and G2	LEH1208A-2GMMSC, LEH1216A-2GMMSC: (2) GE MMSC/RJ-45 combo ports <i>NOTE: These connectors are not present on LEH1208A and LEH1216A switches.</i>
2	(8) RJ-45 ports	LEH1208A and LEH1208A-2GMMSC switches: 10/100 Mbps ports
3	(16) RJ-45 ports	LEH1216A and LEH1216A-2GMMSC switches: 10/100 Mbps ports
4	(3) Power LEDs	See the Indicators table on the next page.
5	Per port: (1) LINK/ACT LED	See the Indicators table on the next page.
6	(2) LINK/ACT LEDs for combo ports	LEH1208A-2GMMSC and LEH1216A-2GMMSC only <i>NOTE: These LEDs are not present on LEH1208A and LEH1216A switches.</i>
7	(1) 5-pin terminal block	Terminal block for Power 1, Power 2, and Ground
8	(1) DC power connector	Links to DC power source
9	(1) DB9 connector	Used for RS-232 serial control
10	(1) Reset button	Press to reset the switch to factory defaults.
11	(1) 2-pin alarm contact	On relay output with current 1 A @ 24 VDC

LEH1200 Series Switches Indicators.

LED	State	Indication
Power 1	Steady ON (Green)	Power ON
	Off	Power OFF
Power 2	Steady ON (Green)	Power ON
	Off	Power OFF
Power 3	Steady ON (Green)	Power ON
	Off	Power OFF
10/100BASE-TX, 100BASE-FX/BX (LED for 10/100-Mbps RJ-45 ports, #5 in Figure 1 on the previous page)		
LINK/ACT	Steady ON (Green)	A valid network connection is established.
	Flashing (Green)	Transmitting or receiving data. <i>NOTE: ACT stands for activity.</i>
10/100/1000BASE-SX/LX/BX (LED for GE MMSC/RJ-45 combo ports, #6 in Figure 1 on the previous page)		
LINK/ACT	Steady ON (Green)	A valid network connection is established on the copper port.
	Flashing (Green)	Transmitting or receiving data on the copper port. <i>NOTE: ACT stands for activity.</i>
	Steady ON (Orange)	A valid network connection is established on the fiber port.
	Flashing (Orange)	Transmitting or receiving data on the fiber port. <i>NOTE: ACT stands for activity.</i>

Power Input Assignment		
Power 3	12 VDC	DC jack
Power 2	+	12–48 VDC
	-	Power ground
Power 1	+	12–48 VDC
	-	Power ground
	Earth ground	
Relay output rating		1 A @ 24 VDC
Relay Alarm Assignment		
Fault	Warning signal disable for the following: <ul style="list-style-type: none"> • The relay contact closes if Power 1 and Power 2 both fail, but Power 3 is ON. • The relay contact closes if Power 3 fails, but Power 1 and Power 2 are ON. 	

Console Configuration

STEP 1: Connect to the switch console.

Connect the DB9 straight cable to the RS-232 serial port of the device and the RS-232 serial port of the terminal or computer running the terminal emulation application. For direct access to the administration console, connect a terminal or a PC equipped with a terminal-emulation program (such as HyperTerminal) directly to the switch console port.

STEP 2: Configure the terminal-emulation program settings.

When using the management method, configure the terminal-emulation program to use the following parameters (you can change these settings after login):

Default parameters:

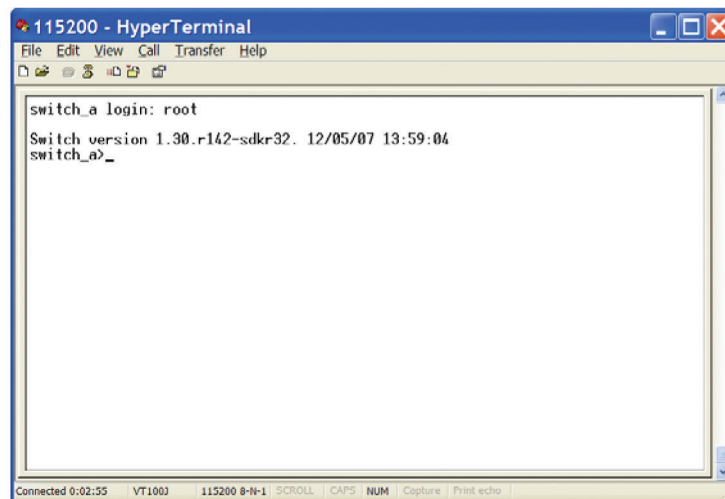
- 115,200 bps
- 8 data bits
- No parity
- 1 stop bit

STEP 3: Press the "Enter" key.

The Command Line Interface (CLI) screen should appear.

STEP 4: Log on to Exec Mode (View Mode).

At the "switch_a login:" prompt, type in "root" and press <Enter> to log on to Exec Mode (or View Mode). The "switch_a>" prompt will show on the screen.



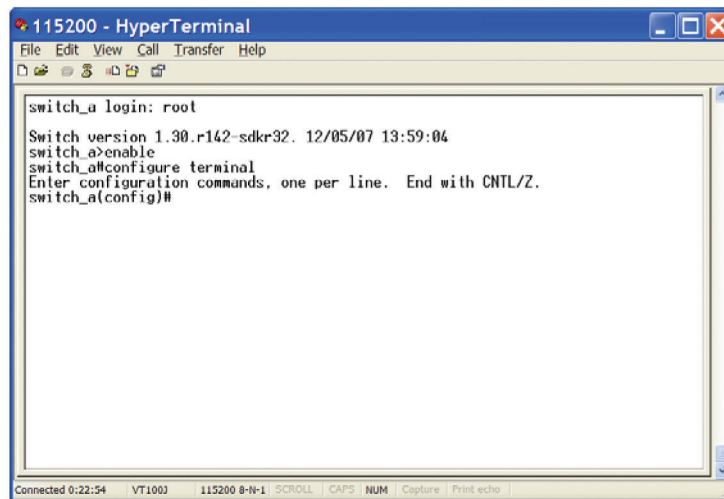
Exec mode (View mode) screen.

STEP 5: Log on to Privileged Exec Mode (Enable Mode).

At the "switch_a>" prompt, type in "enable" and press <Enter> to log on to Privileged Exec Mode (or Enable Mode). The "switch_a#" prompt will show on the screen.

STEP 6: Log on to Configure Mode (Configure Terminal Mode).

At the "switch_a#" prompt, type in "configure terminal" and press <Enter> to log on to Configure Mode (or Configure Terminal Mode). The "switch_a(config)#" prompt will show on the screen.



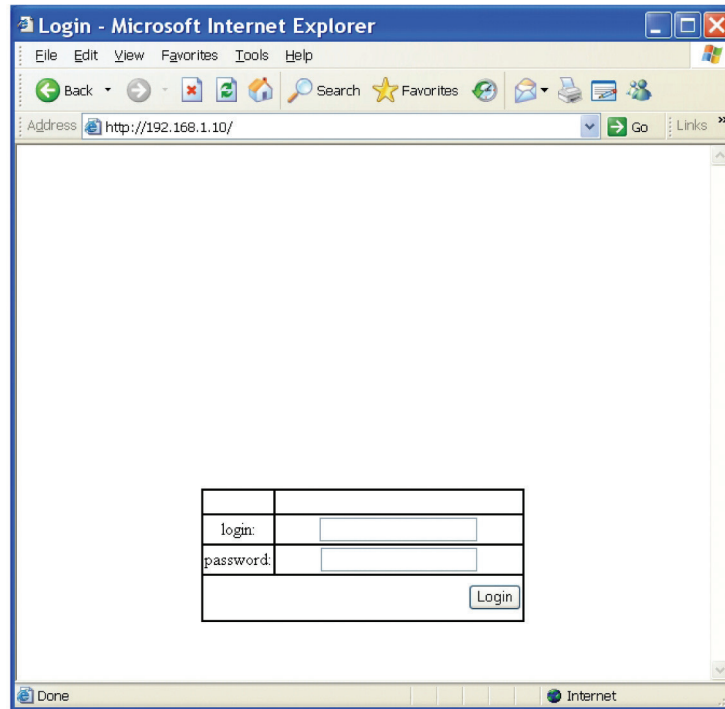
```
switch_a login: root
Switch version 1.30.r142-sdkr32. 12/05/07 13:59:04
switch_a>enable
switch_a#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch_a(config)#
```

Configure terminal mode screen.

Web Configuration

STEP 1: Login to the switch.

Specify the default IP address (192.168.1.10) of the switch in the Web browser. A login window will be shown as below:



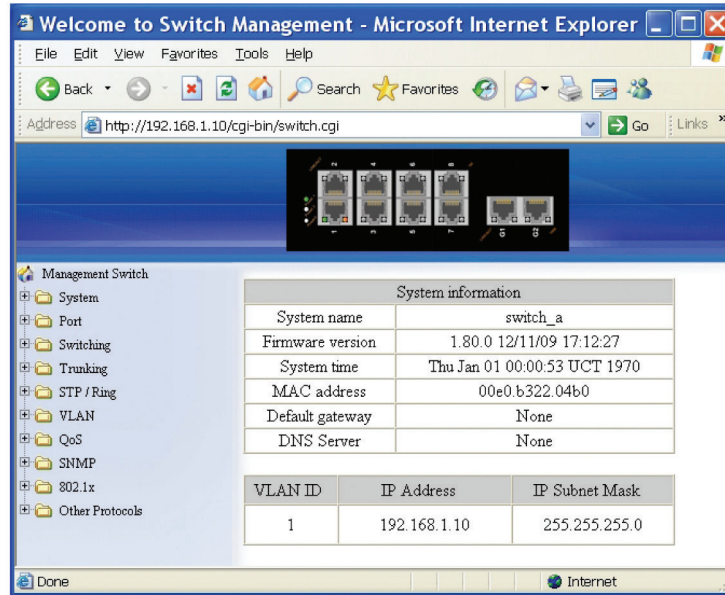
The screenshot shows a Microsoft Internet Explorer browser window titled "Login - Microsoft Internet Explorer". The address bar displays "http://192.168.1.10/". The main content area contains a login form with the following structure:

login:	<input type="text"/>
password:	<input type="password"/>
<input type="button" value="Login"/>	

Login window.

STEP 2: Log in using the factory default settings.

- Enter the factory default login ID: root.
- Enter the factory default password (no password).
- Click on the "Login" button to log on to the switch.



Welcome screen.

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